MOLECULAR CANCER THERAPEUTICS TABLE OF CONTENTS

HIGHLIGHTS

961 Selected Articles from This Issue

FIRST DISCLOSURES

- 963 PF-08046032: A Novel, Investigational CD25-Directed Antibody–Drug Conjugate Optimized for Selective Depletion of Regulatory T Cells in Advanced Malignant Tumors
 Sherif Abdelhamed, Xinqun Zhang, Weiping Zeng, Bryan Grogan, Luke Schilperoort, Reice James, Kelli C. Burley, Samantha M. Sarrett, Lauren Bou, Paromita Raha, Devra J. Olson, Heather L. Sigurjonsson, Melissa M.C. Dominguez, Tyler Nicholas, Haley D. Neff-LaFord, James Fishburn, Andrea R. Lim, Daniel Diolaiti, Priyanka Gupta, Cristina L. Abrahams, Christopher M. Carosino, Ryan A. Heiser, Shyra J. Gardai, and Matthew R. Levengood
- 976 A Novel B7-H4xCD3 Bispecific T-cell Engager (PF-07260437) Synergizes with Breast Cancer Standard of Care and Immune Checkpoint Therapies Keith Abayasiriwardana, Lei Wu, Hanane Laklai, Malgorzata Nocula-Lugowska, Lioudmila Tchistiakova, Jatin Narula, Amy Jackson-Fisher, Jonathon Golas, My-Hanh Lam, Veronika Grinstein, Jung Wook Kang, Jessica C. Kearney, Christine Hosselet, Erik Upeslacis, LuAnna Lemon, Yun Zhang, Changhua Ji, Bernard S. Buetow, Martin B. Finkelstein, Netonia Marshall, Stephanie Bisulco, Edward Rosfjord, Divya Mathur, Jennifer Athanacio, Ashley Thomas, Alexander Trageser, Diane Fernandez, Ziyue Karen Jiang, Sripad Ram, Edward Cabral, Lisa Manzuk, Kevin Maresca, Anand Giddabasappa, Clare Lees, Andrea T. Hooper, Puja Sapra, and Sudhakar Chintharlapalli

REVIEW

993 Advances in Antibody-Drug Conjugates for Endometrial Cancer Pan Tu, Gaofeng Li, Wen Zou, Chao Xu, and Jingjing Wang

SMALL MOLECULE THERAPEUTICS

1005 Zidesamtinib Selective Targeting of Diverse ROS1 Drug-Resistant Mutations Anupong Tangpeerachaikul, Scot Mente, Joe Magrino, Franklin Gu, Joshua C. Horan, and Henry E. Pelish 1020 Coinhibition of Aurora Kinase B and SUV4-20H Induces Synthetic Lethality in Wild-type p53-Deficient Cancer Cells Lei Duan, Kelsey M. O'Hara, Andrew Caldemeyer, and

Carl G. Maki

1030 5'-S-(3-Aminophenyl)-5'-thioadenosine, a Novel Chemoprotective Agent for Reducing Toxic Side Effects of Fluorouracil in Treatment of MTAP-Deficient Cancers

Si Zhang, Hui Xue, Nelson K.Y. Wong, Thomas Doerksen, Fuqiang Ban, Shawn Aderson, Stanislav Volik, Yen-Yi Lin, Zhongye Dai, Ivica Bratanovic, Hongwei Cheng, Colin Collins, Artem Cherkasov, Jeremy E. Wulff, and Yuzhuo Wang

1040 M4205 (IDRX-42) Is a Highly Selective and Potent Inhibitor of Relevant Oncogenic Driver and Resistance Variants of KIT in Cancer Christina Esdar, Nina Linde, Andreas Blum, Hanno Schieferstein, Christine Drechsler, Eva Sherbetjian, Carl Petersson, Edith Ross, Birgitta Leuthner, Ulrich Grädler, Dieter Dorsch, and Andree Blaukat

LARGE MOLECULE THERAPEUTICS

1054 A Pharmacokinetic and Pharmacodynamic Model of an IL-12 Anchored-Drug Conjugate for the Treatment of Solid Tumors Hitesh B. Mistry, David Hodson, Sailaja Battula, Michael M. Schmidt, Robert Tighe, Howard L. Kaufman, and Christophe Chassagnole

1063 Development of a Tumor-Specific Multivalent CD40 Agonist Antibody FAPxCD40 for Cancer Therapy: Balancing Efficacy and Toxicity Simeng Chen, Yuan Lin, Dan Li, Xiaoru Zhou, Xing Sun, Changyong Yang, and Cheng Liao

MODELS AND TECHNOLOGIES

1075 CD24-Targeted CAR-T Cells Mediated Long-term Antitumor Efficacy through Activation of Endogenous Tumor Immune Responses Yong Huang, Xiao Yang, Jing Li, Weilin Zhou, Fengling Wang, Jiaqian Li, Yalan Zhang, Feiyang Yan, Haozhan Gao, Xinyu Gu, Sha Luo, Yuening Yang, Mei Liu, Xiao Liang, Lin Jiang, Maorong Fu, Jinhua Su, Yuquan Wei, and Wei Wang

TABLE OF CONTENTS

1088 Histotripsy-Focused Ultrasound Treatment Abrogates Tumor Hypoxia Responses and Stimulates Antitumor Immune Responses in Melanoma Brian Song, Heineken Queen, Sarah F. Ferris, Reliza McGinnis, Chaitanya Karanam, Natalie Gatteno, Katherine Buglak, Hanna Kim, Jintao Xu, Kristie D. Goughenour, Zhen Xu, Michal A. Olszewski, Clifford S. Cho, and Anutosh Ganguly

TARGETING DRUG RESISTANCE

 1099 Reducing Dietary Protein Enhances the Antitumor Effects of Chemotherapy through Immune-Mediated Mechanisms
Samantha C. Mulkeen, Suchandrima Saha, Carmen R. Ferrara, Vladimira Bibeva, Michael C. Wood, Ji Dong K. Bai, Tanara V. Peres, Daniel Martinez-Martinez, Alex Montoya, Pavel Shliaha, Filipe Cabreiro, and David C. Montrose

COMPANION DIAGNOSTIC, PHARMACOGENOMIC, AND CANCER BIOMARKERS

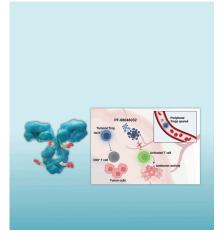
1111 ¹⁸F-FLT PET, a Noninvasive Pharmacodynamic Biomarker of Tumor Cell Proliferation, Detected Differential Response to Various Cyclin-Dependent Kinase (CDK) Inhibitors

Anand Giddabasappa, Ziyue Karen Jiang, Bing Yang, Laigao Chen, Feng Liu, Edward Cabral, Sripad Ram, Britton Boras, Nanni Huser, Cathy C. Zhang, Kavon Noorbehesht, Lisa K. Manzuk, Ravi Visswanathan, Sepideh Mojtahedzadeh, Timothy Affolter, Jason Carmody, Aubrey Nayeon Kang, Matthew D. Petroski, Penny Lai Khamphavong, Todd VanArsdale, Quang-Dé Nguyen, Kevin P. Maresca, and Stephen G. Dann

ABOUT THE COVER

A new investigational affinity-detuned antibody drug conjugate (ADC) optimized to selectively target and deplete intratumoral regulatory T cells (Tregs), which are critical in suppressing antitumor immunity. By detuning its binding affinity to CD25, PF-08046032 minimizes the depletion of peripheral Tregs, thereby lowering the risk of associated autoimmunity. This novel molecule combines a CD25 antibody with the cytotoxic agent monomethyl auristatin E (MMAE), delivering effective antitumor activity through targeted cytotoxicity against Treg but not the effector CD8⁺ T cells. Our presented preclinical studies demonstrate that PF-08046032 effectively depletes tumor-infiltrating Tregs with high CD25 levels while sparing other immune cells, demonstrating its potential as a novel therapeutic approach in advanced malignancies. The graphic was generated in part using BioRender.com. See graphical abstract and read the full article on page 963.

doi: 10.1158/1535-7163.MCT-24-7-CVR



<u>NOTICE</u>: This notice serves to inform the reader that, in 2023, AACR received a donation by Pfizer of the rights to royalties from the sale—within the United States—of Bavencio[®] (avelumab), a pharmaceutical owned by Merck. None of these funds are being, or will be, used to directly support any specific publication or author. If an individual article is published that deals with this particular drug, such article will include standard financial disclosures per AACR journal policy. For more detail regarding AACR's established policies for authors, please go to https://aacrjournals.org/pages/editorial-policies#coi.